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CURRENT NOTES ON ANTHROPOLOGY.

LANGUAGES OF HONDURAS.

THE Spanish spoken in Central America has been examined by various writers, notably Ferraz, Berendt and Barbarena. On that which prevails in Honduras a careful study has lately appeared from the pen of Alberto Membreno. It is a well printed volume of 270 pages. Many of the words quoted as peculiar are derived from the native dialects. The author, therefore, has collected, in an appendix of 75 pages, a number of vocabularies and grammatical notices of these idioms. They are seven in number, to wit, the Moreno, Zambo, Sumo, Paya, Jicaque, Lenco and Chorti. He prefaces these with a brief sketch of the present condition of the native tribes in the republic. The ethnographic value of the volume is considerable ('Hondureñismos,' Tegucigalpa, 1897).

THE RUINS OF MEXICO.

In the *Archiv für Ethnographie* for January there is a description of the ruins of the native city Mixco, in Guatemala, by Dr. Carl Sapper. This was one of the ancient strongholds destroyed by Alvarado in 1525. There has been some uncertainty as to what branch of the great Maya stock inhabited it, but it would appear to have been the chief city of the Pokomams or their near relatives.

In Dr. Sapper's article he introduces a ground plan with elevations of the fortress and town, adding detailed illustrations of several of the ruins, in part restored. While exhibiting some peculiarities of architecture, a general comparison with other remains of the Mayas permits us to class it with the relics of that cultured people. Dr. Sapper remarks that the ruins in north-western Honduras are purely Mayan in type and in details.

ETHNOGRAPHY OF CUBA.

In connection with our present contest

concerning Cuba it may be worth while to note that a Spanish professor, Dr. Vidal y Careta, printed last year an article of some length in the scientific periodical *La Naturaleza*, No. 8, on the different races who have successively occupied that island or migrated to it within the historic period. He begins by calling the aboriginal stock 'Caribs.' In this point it may be asked whether he is not in a popular error. There appears no evidence that the great Carib stock of South America ever established permanent settlements anywhere in Cuba, although they undoubtedly made predatory incursions against its inhabitants. These certainly belonged to the Arawack stock of the south. In reference to later time Professor Vidal offers less which can be criticised.

D. G. BRINTON.

UNIVERSITY OF PENNSYLVANIA.

ASTROPHYSICAL NOTES.

FROM the measurement of 234 out of 400 solar photographs taken from 1891 to 1894 by several Russian observers, Stratonoff, of Taschkent, has recently contributed, in the *Memoirs of the St. Petersburg Academy*, a valuable study of the movements of the solar faculæ. The principal difficulty in such work is in identifying the faculæ on successive days. 103 faculæ were observed on two days, and 5 on three days. The methods of reduction are given in full, and the accuracy of the measures is indicated by the full data for four plates. A list is given of 1062 faculæ for which the angle of daily rotation was determined. In the zone of solar latitude 0° to 10° the angle was found to be $14^{\circ}.6$, and in the zone 30° to 40° , $13^{\circ}.6$, with probable errors less than $0^{\circ}.1$.

The conclusion is reached that the faculæ move at distinctly different angular rates in different solar latitudes, but under a more complicated law than in case of spots. The

period of a solar rotation at the equator as determined from the faculæ is 24.64 days. The order of rapidity of rotation is faculæ, then spots, and last the stratum in which the dark lines are produced which were used by Dunér in his spectroscopic determination of the solar rotation.

THE first volume of the Publications of the Zurich Observatory has appeared, aided by a publication fund bequeathed by the late Director, Professor Rudolph Wolf. It contains the observations by Professor Wolfer, now Director, on the solar surface in the years 1887-89. The introduction of photographic methods has not detracted from the value of systematic visual observations of solar phenomena. At Zurich these observations have long been a specialty. Spots, faculæ and prominences are included in the observations, which are given in detail with location in heliographic latitude and longitude, followed by charts graphically indicating the distribution. It seems that the faculæ in the years 1887-89 had a tendency to develop in two special regions of solar longitude nearly diametrically opposite to each other. In a less degree this is shown by the spots, and somewhat by the prominences. The Publication is handsomely printed.

E. B. F.

NOTES ON INORGANIC CHEMISTRY.

MANGANESE salts in which the metal is trivalent are known, but they are few in number, and all are decomposed by contact with water. In the last *Journal of the Chemical Society*, C. E. Rice describes two double manganic chlorids, $\text{MnCl}_3 \cdot 2\text{NH}_4\text{Cl} \cdot \text{H}_2\text{O}$ and $\text{MnCl}_3 \cdot 2\text{KCl} \cdot \text{H}_2\text{O}$, which are stable up to the temperature of 100° . They are formed by dissolving the higher oxids of manganese in fuming hydrochloric acid, immersed in a freezing mixture and adding a solution of ammonium or potassium

chlorid. The compounds form minute transparent crystals transmitting ruby-colored light. They dissolve in hydrochloric acid to a dark solution, but are decomposed by water. The analogy of manganese to iron is shown by the fact that the crystals are apparently isomorphous with $\text{FeCl}_3 \cdot 2\text{NH}_4\text{Cl} \cdot \text{H}_2\text{O}$ and $\text{FeCl}_3 \cdot 2\text{KCl} \cdot \text{H}_2\text{O}$. The chlorid MnCl_3 could not be isolated, and there was no evidence of the formation of any MnCl_4 .

THE last number of the *Chemical News* reprints an article from the *Proceedings* of the Australasian Association for the Advancement of Science, by Professor Liversidge, of the University of Sydney, on the corrosion of aluminum. Two shallow dishes of ordinary sheet aluminum 1 mm. thick were exposed on the laboratory roof for over a year. Rain water caught in the dishes so that they were exposed to the action of any dissolved salts of the atmosphere. The metal soon lost its brilliancy, became gray and rough, and the incrustation did not wash off and could not be rubbed off by a cloth. The dishes increased in weight somewhat less than one per cent. The tarnish was probably due to the formation of a hydrated oxid of aluminum. The tarnish must be comparatively superficial considering the small increase in weight in over a year's exposure. It is, however, clear that the statement frequently found in books that aluminum is unaltered by exposure to the air is not true of the commercial metal, whatever may be the case with the chemically pure metal. In another experiment by Professor Liversidge a sheet of aluminum 1 mm. thick and of 24 square inches' surface was dipped in a solution of salt almost daily for three months, each time being allowed to dry. The plate lost 0.1% in weight, and after washing and rubbing dry 0.3%, showing comparatively little corrosion.

J. L. H.